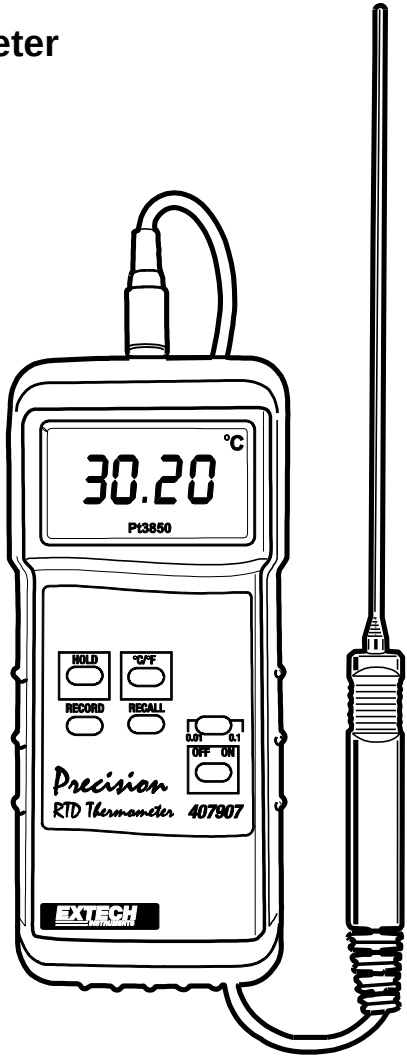
EXTECH INSTRUMENTS

User's Manual

RTD Thermometer

Model 407907



Shown with RTD probe*
* Probe sold separately.

Introduction

Congratulations on your purchase of the Heavy Duty Extech 407907 RTD Thermometer which offers high precision and selectable 0.1° and 0.01° resolution. The LCD display provides low battery and overload indication. Selectable temperature units °C & °F provides measurement versatility. This meter is shipped fully tested and calibrated and with proper use will provide years of reliable service.

Specifications

General Specifications

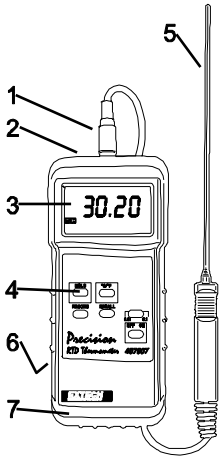
Display	4-1/2 digit (20,000 count) LCD display with over-range and low battery indication
Measurement	Temperature (selectable °C & °F units)
Data Hold	Freezes displayed reading
RTD Probes (sold separately)	4-wire platinum 100Ω RTD; 0.00385 alpha coefficient (meet DIN IEC 751)
RTD probe jack	Proprietary 4 pin circular connector (uses Extech RTD probes – sold separately)
Sampling Time	Approximately 0.4 seconds
Memory record/recall	Meter stores Maximum and Minimum readings
Data Output	RS-232 PC Interface
Operating conditions	Temperature: 32°F to 122°F (0°C to 50°C); RH: < 80%
Power Supply	9V battery
Power consumption	15 mA DC (approx.)
Weight	0.53 lbs. (242g)
Dimensions	7.1 x 2.8 x 1.3” (180 x 72 x 32 mm)

Range Specifications

Temperature Ranges		**Resolution**	**Accuracy (% of reading)**
°F	-199.99° to 392.00° F	0.01° F	± (0.1% + 0.4°F) *
	392.0° to 1562.0°F	0.1° F	
°C	-199.99° to 199.00°C	0.01° C	± (0.1% + 0.2°C) *
	200.0° to 850.0°C	0.1° C	
			** Probe accuracy is additional*

Meter Description

1. RTD probe connector
2. RS232 connector
3. LCD display
4. Keypad
5. RTD probe (Sold separately)
6. Battery compartment (rear)
7. Protective holster



Operation

Connecting the optional RTD probe

Plug the optional 4-wire RTD probe(sold separately) into the jack at the top of the meter. The jack is keyed and can only be inserted one way. Use care when inserting the probe.

Powering the meter

To power the meter, slide the **OFF/ON** switch to the **ON** position. If the display remains blank, check the 9V battery (rear compartment). Slide the switch to the **OFF** position to turn the meter off. Remove the battery if the meter is to be stored for long periods.

Selecting units of measure

Press the **°F/°C** button to select the desired temperature units. The LCD display will show the **°C** or the **°F** symbol to indicate the currently selected unit of measure.

Selecting the resolution

The meter offers 0.1° and 0.01° display resolution. To select the resolution use the **0.01°/0.1°** switch. The display will reflect the currently selected resolution. Use the specifications shown earlier in this manual to determine the best resolution for the measurement range of a given application.

Taking measurements

Once the meter has been setup and a probe has been inserted in the jack at the top of the meter, place the temperature probe in the area under test. Give the meter several seconds to stabilize. Read the temperature measurement on the LCD. If dashes appear on the display, either the reading is out of range or the RTD probe is not connected (or defective).

Maximum and Minimum (MAX/MIN) Record and Recall

When selected, the recording function stores the MAX/MIN readings for later recall.

1. Press the **RECORD** button once. The **RECORD** indicator will appear on the display.
2. After readings are taken, press the **RECALL** button to view the maximum reading. The **MAX** indicator will appear on the display to inform the user that the reading now on the display is the highest reading since the **RECORD** button was first pressed.
3. Press the **RECALL** button again to view the minimum reading. The **MIN** indicator will appear on the display to inform the user that the reading now on the display is the lowest since the **RECORD** button was first pressed.
4. To return to normal operation, press the **RECORD** button again. The **RECORD, MAX,** and **MIN** indicators will extinguish.

Data Hold

To freeze a reading on the LCD, press the **HOLD** button. Temperature readings require several seconds to stabilize, therefore use Data Hold only after a reading has fully stabilized. Press the **HOLD** button again to return the meter to normal operation.

RS-232 PC Interface

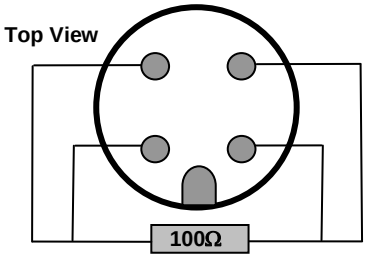
The meter includes a built-in RS232 serial data port. This interface was designed for use with the Extech Data Acquisition Software (Extech Part Number 407001) and enables the user to store readings on a PC. For more information, contact Extech or refer to the manual accompanying the software for details.

Battery Replacement

The low battery indicator (battery symbol) appears on the LCD when the 9V battery needs replacing. Reliable readings can be obtained for several hours after the first appearance of the low battery indicator. To replace the battery:

1. Remove the meter's rubber protective holster.
2. Remove the battery compartment cover (back of meter) using a small coin or screwdriver.
3. Replace the 9V battery (heavy duty, alkaline type) and reinstall the cover.
4. Replace the rubber holster.

4-wire RTD input pin-out



Warranty

FLIR Systems, Inc. warrants this Extech Instruments brand device *to be free of defects in parts and workmanship for* ***one year*** *from date of shipment (a six month limited warranty applies to sensors and cables). If it should become necessary to return the instrument for service during or beyond the warranty period, contact the Customer Service Department for authorization. Visit the website www.extech.com for contact information. A Return Authorization (RA) number must be issued before any product is returned. The sender is responsible for shipping charges, freight, insurance and proper packaging to prevent damage in transit. This warranty does not apply to defects resulting from action of the user such as misuse, improper wiring, operation outside of specification, improper maintenance or repair, or unauthorized modification. FLIR Systems, Inc. specifically disclaims any implied warranties or merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. FLIR's total liability is limited to repair or replacement of the product. The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.*

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Support Lines: U.S. (877) 439-8324; International: +1 (603) 324-7800

Technical Support: Option 3; E-mail: support@extech.com

Repair & Returns: Option 4; E-mail: repair@extech.com

Product specifications are subject to change without notice

Please visit our website for the most up-to-date information

www.extech.com

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